

WHAT IS CLAIMED IS:

1. An organic device, comprising:
 - a first electrode;
 - a second electrode;
 - a first organic layer disposed between the first electrode and the second electrode, the first organic layer further comprising:
 - a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;
 - a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;
 - a second organic layer disposed between the first electrode and the second electrode, the second organic layer further comprising:
 - the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;
 - the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material.
2. The device of claim 1, wherein:
 - the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant;
 - the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant.
3. The device of claim 2, wherein the first organic layer consists essentially of the first and second organic materials, and the second organic layer consists essentially of the first and second organic materials.
4. The device of claim 2, wherein the first organic material is PTCDA, and wherein the second organic material is BTQBT.

5. The device of claim 2, wherein the first organic material is F16-CuPc, and wherein the second organic material is BTQBT.
6. The device of claim 2, wherein the first organic material is F16-CuPc, and wherein the second organic material is CuPc.
7. The device of claim 2, wherein the device is an organic light emitting device, and wherein the device further comprises an emissive layer disposed between the n-type layer and the p-type layer.
8. The device of claim 2, wherein the first organic material is an organic small molecule material, and wherein the second organic material is an organic small molecule material.
9. The device of claim 2, wherein the electron affinity of the first organic material is within about 0.4 eV of the ionization potential of the second organic material.
10. The device of claim 9, wherein the electron affinity of the first organic material is within about 0.2 eV of the ionization potential of the second organic material.
11. The device of claim 2, wherein the first organic layer and the second organic layer are in direct contact with each other.
12. The device of claim 11, wherein the device is an organic transistor.
13. The device of claim 2, wherein the device is an organic photosensitive device.
14. The device of claim 1, wherein the second organic layer is disposed between the first organic layer and the second electrode.
15. A plurality of devices, comprising:

a first device disposed on a substrate, wherein the first device further comprises a first organic layer further comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;

a second device disposed on the substrate, wherein the second device further comprises a second organic layer further comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material; and

the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material.

16. The plurality of devices of claim 15, wherein the second organic material is a donor molecule in the first organic layer, and the first device is an n-type transistor, and

the first organic material is an acceptor molecule in the second organic layer, and the second device is a p-type transistor.

17. A method of fabricating a device, comprising:

providing a first electrode;

co-depositing a first organic material and a second organic material to form a first organic layer over the first electrode, wherein the first organic material is present in the first organic layer at a concentration greater than 50% molar;

co-depositing the first organic material and the second organic material to form a second organic layer over the first organic layer, wherein the second organic material is present in the second organic layer at a concentration greater than 50% molar;

depositing a second electrode over the second organic layer.

18. The method of claim 17, wherein the second organic material acts as an n-dopant in the first organic layer, and the first organic material acts as a p-dopant in the second organic layer.

19. The method of claim 17, wherein the second organic material acts as an p-dopant in the first organic layer, and the first organic material acts as an n-dopant in the second organic layer.

20. The method of claim 17, wherein the electron affinity of the first organic material is within about 0.4 eV of the ionization potential of the second organic material.

21. The method of claim 20, wherein the electron affinity of the first organic material is within about 0.2 eV of the ionization potential of the second organic material.